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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,417	04/22/2005	Takashi Tanimoto	81784.0326	1778

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EXAMINER	
HSU, AMY R	
ART UNIT	**PAPER NUMBER**
2622	

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12/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/532,417	TANIMOTO, TAKASHI	
	Examiner	Art Unit	
	Amy Hsu	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 April 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/6/2007,6/6/2005,4/22/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima (US 6236428) in view of Ikeyama (US 7068310).

Regarding Claim 1, Fukushima teaches an image pickup device comprising: a first solid-state image pickup element which accumulates first information electric charges generated in response to a first object image in a plurality of light reception pixels (*Fig. 2 reference number 21R)*; a first drive circuit which obtains a first image signal by driving the first solid-state image pickup element (*Fig. 2 reference number 24R and Col 6 Lines 48-51)*; a second solid-state image pickup element which accumulates second information electric charges generated in response to a second object image in a plurality of light reception pixels (*Fig. 2 reference number 21L)*; a second drive circuit which obtains a second image signal by driving the second solid-state image pickup element (*Fig. 2 reference number 24L).* Fukushima does not specifically show the source and controller of power to the CCDs, however one of ordinary skill in the art would recognize an imaging system inherently has a main processing or control unit to supply power and control power. In Col 7 Lines 23-28

Fukushima teaches when power to the apparatus is turned on, the data controller sends a reset signal to the timing gates generators which generate a drive pulse to the image sensing devices. The control unit of an imaging apparatus inherently selects and supplies a predetermined power supply voltage to both CCDs in order to operate the device to produce the output seen in Fig. 5. The first and second solid-state image pickup elements operate in a time-sharing manner (*Fig. 5 shows the outputs of the two CCDs with respect to time and therefore shows the signals are output in a time-sharing manner, specifically VOUTL and VOUTR signals share, or both operate either in sync or alternately within the same shared period of time)*, and the power supply voltage is supplied to the solid-state image pickup element which is in an operating state. One of ordinary skill in the art realizes that in order for a solid state image pickup device to be operating it must receive power to operate.

Although one of ordinary skill in the art knows a solid state image pickup device such as a CCD is scanned in at least one direction and it is also well known in the art to scan the CCD both horizontally and vertically controlled by a timing control circuit, Fukushima fails to specifically teach a timing control circuit which determines timing of vertical scanning and horizontal scanning of the first and second solid-state image pickup elements.

Ikeyama teaches an imaging device with a timing generator to determine timing for driving a CCD by controlling vertical and horizontal scanning to control the operation of the CCD. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Fukushima with an image sensor

such as specifically a CCD with operation controlled by vertical and horizontal scanning controlled by a timing generator because this is well known in the art to speed up the process of operation of CCD.

Regarding Claim 2, Fukushima teaches the image pickup device according to claim 1, wherein the selector circuit overlaps a part of a period in which the power supply voltage is supplied to one of the first and second solid-state image pickup elements with respect to a period in which the power supply voltage is supplied to the other one of the first and second solid-state image pickup elements. Fukushima teaches the left and right CCDs are initialized to drive in sync (*Col 7 Lines 23-27)* and Fig. 3 shows the outputs from the CCDs, RDATA and LDATA are in sync. The power supply voltage must be supplied in order to operate the CCDs to obtain the output signals shown in Fig. 3. Therefore one of ordinary skill in the art would recognize the power supply voltage supplied to the first and second image pickup elements are in sync, meaning they overlap a part of a period in which the other image pickup element is receiving power; the part of the period being the entire period if they are in sync.

Regarding Claim 3, Fukushima teaches the image pickup device according to claim 1, wherein the first solid-state image pickup element (*Fig. 2 reference number 21R)* comprises a first capacitance which takes in and accumulates the first information electric charges which are transferred and output and a first output amplifier which takes out a change in potential of the first capacitance according to an accumulated

electric charge quantity of the first information electric charges and outputs the first image signal (*one of ordinary skill in the art knows a solid state image pickup element such as a pixel of a CCD comprises a capacitor to accumulate electric charge proportional to the light intensity which is transferred and input to an amplifier which converts the charge into a voltage which is output)* , the second solid-state image pickup element (*Fig. 2 reference number 21L)* comprises a second capacitance which takes in and accumulates the second information electric charges which are transferred and output and a second output amplifier which takes out a change in potential of the second capacitance according to an accumulated electric charge quantity of the second information electric charges and outputs the second image signal (*as stated above)*, and the selector circuit supplies the power supply voltage to the output amplifier of the solid-state image pickup element which is in an operating state of the first and second output amplifiers. One of ordinary skill in the art would realize a power supply voltage must be supplied to a device such as an output amplifier in order for it to operate, so whichever amplifier is in an operating state must have power supplied from a selector circuit such as a CPU.

Regarding Claim 4, Fukushima teaches the image pickup device according to claim 3, wherein the selector circuit overlaps a part of a period in which the power supply voltage is supplied to one of the first and second output amplifiers with respect to a period in which the power supply voltage is supplied to the other one of the first and second output amplifiers. Fukushima teaches the two image pickup devices are

synchronized and the outputs are shown in sync in Fig. 3. One of ordinary skill in the art would realize that the operations of the image pickup devices from initialization to outputting signals are synchronized and so the power supplied to the two amplifiers within the CCD are synchronized. Therefore there is an overlap in the period of which power is supplied to both amplifiers, the part of the period being the entire period.

Regarding Claim 5, Fukushima teaches the image pickup device according to claim 1, further comprising an output selector circuit which takes in the first and second image signals and selectively outputs the first and second image signals to a processing circuit on a next stage in synchronization with operation timing of the first and second solid-state image pickup elements (*Fig. 2 reference number 31 is an output selector circuit which selects outputs from the first and second image signals, GDATA and MDATA from the two CCDs and puts it into a DA circuit which is a processing circuit. This is done in synchronization with operation timing of the two CCDs as seen connected in Fig. 2)*, wherein the output selector circuit has a plurality of input paths respectively corresponding to the first and second image signals (*Fig. 2 reference number 31 has two inputs coming from the two CCDs after processing)*, each input path operates upon receiving the power supply voltage, and the selector circuit selectively supplies the power supply voltage to each of the plurality of input paths in synchronization with the operation timing of the first and second solid-state image pickup elements. One of ordinary skill in the art would recognize that once power is supplied the operation takes place, where the operation is outlined in Fig. 2

including outputting processed RDATA into the input path leading to reference number 31 where the two outputs are combined. This is in synchronization with the timing of the two CCDs (*Col 7 Lines 18-2).*

Regarding Claim 6, Fukushima teaches the image pickup device according to claim 5, wherein the selector circuit overlaps a part of a period in which the power supply voltage is supplied to one of the plurality of input paths with respect to a period in which the power supply voltage is supplied to the other one of the plurality of input paths. One of ordinary skill in the art would realize that a power supply voltage must be supplied to the device at various points to complete the operation including sending the signal through the input paths into the output selector circuit where signals from both CCDs are combined. Fukushima teaches the two CCDs are synchronized, so one of ordinary skill in the art would realize the power supply voltage is supplied in sync to the input paths. This would be an overlap in the part of the period, being the section comprising the period where the power supply voltage is applied to both CCDs.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ogino (US 6762794) teaches an image pickup apparatus for capturing parallax images.

Oh (US 5698861) teaches a system with two image sensors.

Tani (US 5379069) teaches a device with first and second CCD.

Tabata (US 6449309) teaches a device with parallax selector.

Fujiwara et al. (US 6999125) teaches an image pick apparatus with right and left optical systems and time-divisionally switching between incident light.

Kubo (US 6639626) teaches a photographing apparatus with two CCDs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy Hsu whose telephone number is 571-270-3012. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on 571-272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amy Hsu
Examiner

Art Unit 2622

ARH 12/18/07

LIN YE
SUPERVISORY PATENT EXAMINER